

AMENDMENTS TO THE CLAIMS

What is claimed is:

1. (Currently Amended) A treating agent for forming a protective coating, comprising:

an alkali silicate, as represented by the formula $M_2O \cdot nSiO_2$ [where n represents a number of 2 to 9, and M represents at least one of Na, K, Li, and NR_4 (where R independently represents a hydrogen atom or an alkyl group)];

at least one lubricating component selected from among soaps, metallic soaps, waxes, and polytetrafluoroethylenes;

at least one viscosity modifier in an amount of 1 to 10 wt% based on the total mass of alkali silicate and lubricating component;

and water;

wherein the at least one viscosity modifier comprises at least one inorganic thickener selected from the group consisting of finely powdered silica, bentonite, kaolin, and synthetic hectorite.

2. (Original) A treating agent for forming a protective coating according to Claim 1, wherein the amount of alkali silicate is 10 to 99 mass% and the amount of lubricating component is 1 to 90 mass% on the basis of the total mass of alkali silicate and lubricating component.

3. (Cancelled)

4. (Original) A treating agent for forming a protective coating according to Claim 1, wherein the alkali silicate is at least one selected from the group consisting of sodium silicates and potassium silicates with SiO_2/M_2O molar ratios of 2 to 4, lithium silicates with SiO_2/M_2O molar ratios of 3.5 to 8.5, and ammonium silicates with SiO_2/M_2O molar ratios of 3 to 9.

5. (Cancelled)

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6. (Original) A treating agent for forming a protective coating according to Claim 1, comprising at least one soap selected from the group consisting of sodium stearate and potassium stearate.

7. (Original) A treating agent for forming a protective coating according to Claim 1, comprising at least one metallic soap selected from the group consisting of calcium stearate, aluminum stearate, barium stearate, lithium stearate, and zinc stearate.

8. (Original) A treating agent for forming a protective coating according to Claim 1, comprising at least one wax selected from the group consisting of polyethylene wax, polypropylene wax, carnauba wax, beeswax, and paraffin wax.

9. (Currently Amended) A treating agent for forming a protective coating according to Claim 1, wherein the at least one viscosity modifier comprises ~~is selected from the group consisting of~~ organic polymer-based thickeners ~~and inorganic thickeners~~.

10. (Previously Presented) A treating agent for forming a protective coating according to Claim 1, wherein the at least one viscosity modifier comprises at least one organic polymer-based thickener selected from the group consisting of hydroxyethylcellulose, carboxymethylcellulose, polyacrylamide, sodium polyacrylate, polyvinylpyrrolidone, and polyvinyl alcohol.

11. (Currently Amended) A treating agent for forming a protective coating according to Claim 1, wherein the ~~at least one viscosity modifier comprises~~ at least one inorganic thickener is ~~selected from the group consisting of finely powdered silica, bentonite, kaolin, and synthetic hectorite~~.

12. (Original) A treating agent for forming a protective coating according to Claim 1, additionally comprising at least one substance selected from the group consisting of solid lubricants and extreme-pressure additives.

13. – 17. (Cancelled)

18. (Currently Amended) A treating agent for forming a protective coating, comprising at least alkali silicate selected from the group consisting of sodium silicates

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and potassium silicates with $\text{SiO}_2/\text{M}_2\text{O}$ molar ratios of 2 to 4, lithium silicates with $\text{SiO}_2/\text{M}_2\text{O}$ molar ratios of 3.5 to 8.5, and ammonium silicates with $\text{SiO}_2/\text{M}_2\text{O}$ molar ratios of 3 to 9, at least one lubricating component in dispersed, emulsified, or both dispersed and emulsified form selected from among soaps, metallic soaps, waxes, and polytetrafluoroethylenes, at least one viscosity modifier in an amount of 1 to 10 wt% based on the total mass of alkali silicate and lubricating component, said at least one viscosity modifier comprising at least one inorganic thickener selected from the group consisting of finely powdered silica, bentonite, kaolin, and synthetic hectorite; and water and wherein the amount of alkali silicate is 15 to 95 mass% and the amount of lubricating component is 5 to 85 mass% on the basis of the total mass of alkali silicate and lubricating component.

19. (Cancelled)

20. (Original) A treating agent for forming a protective coating according to Claim 18, wherein the alkali silicate is at least one selected from the group consisting of sodium silicates and potassium silicates with $\text{SiO}_2/\text{M}_2\text{O}$ molar ratios of 2 to 4.

21. (Cancelled)

22. (Original) A treating agent for forming a protective coating according to Claim 18, comprising at least one soap selected from the group consisting of sodium stearate and potassium stearate.

23. (Original) A treating agent for forming a protective coating according to Claim 18, comprising at least one metallic soap selected from the group consisting of calcium stearate, aluminum stearate, barium stearate, lithium stearate, and zinc stearate.

24. (Original) A treating agent for forming a protective coating according to Claim 18, comprising at least one wax selected from the group consisting of polyethylene wax, polypropylene wax, carnauba wax, beeswax, and paraffin wax.

25. (Currently Amended) A treating agent for forming a protective coating according to Claim 18, wherein the at least one viscosity modifier comprises selected

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~~from the group consisting of organic polymer-based thickeners and inorganic thickeners.~~

26. (Previously Presented) A treating agent for forming a protective coating according to Claim 18, wherein the at least one viscosity modifier comprises at least one organic polymer-based thickener selected from the group consisting of hydroxyethylcellulose, carboxymethylcellulose, polyacrylamide, sodium polyacrylate, polyvinylpyrrolidone, and polyvinyl alcohol.

27. (Currently Amended) A treating agent for forming a protective coating according to Claim 18, wherein the ~~at least one viscosity modifier comprises at least one inorganic thickener~~ is selected from the group consisting of finely powdered silica, bentonite, kaolin, and synthetic hectorite.

28. (Original) A treating agent for forming a protective coating according to Claim 18, additionally comprising at least one substance selected from the group consisting of solid lubricants and extreme-pressure additives.

29. – 33. (Cancelled)

34. (Previously Presented) A treating agent for forming a protective coating according to Claim 20, additionally comprising :

a viscosity modifier selected from hydroxyethylcellulose, carboxymethylcellulose and synthetic hectorite in an amount of 2 to 5 wt% based on the total mass of alkali silicate and lubricating component; and

at least one solid lubricant and/or extreme-pressure additive, wherein said solid lubricant is selected from the group consisting of graphite, molybdenum disulfide, boron nitride, fluorinated graphite, and mica and said extreme-pressure additive is selected from the group consisting of an olefin sulfide, a sulfide ester, a sulfite, a thiocarbonate, a chlorinated fatty acid, a phosphate ester, a phosphite ester, molybdenum dithiocarbamate, molybdenum dithiophosphate, and zinc dithiophosphate.

35. (Currently Amended) A composition for forming a corrosion preventive protective coating, comprising~~consisting of~~:

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an alkali silicate, as represented by the formula $M_2O \cdot nSiO_2$, where n represents a number of 2 to 9, and M represents at least one of Na, K, Li, and NR_4 , where R independently represents a hydrogen atom or an alkyl group;

at least one lubricating component, in an amount of 5 to 85 wt% based on the total mass of alkali silicate and lubricating component, is selected from among oils, soaps, metallic soaps, waxes, and polytetrafluoroethylenes;

at least one viscosity modifier in an amount of 1 to 10 wt% based on the total mass of alkali silicate and lubricating component; and

water;

wherein the at least one viscosity modifier comprises at least one inorganic thickener selected from the group consisting of finely powdered silica, bentonite, kaolin, and synthetic hectorite.

36. (Previously Presented) A composition for forming a corrosion preventive protective coating according to Claim 35, comprising at least one organic polymer-based thickener selected from the group consisting of hydroxyethylcellulose, carboxymethylcellulose, polyacrylamide, sodium polyacrylate, polyvinylpyrrolidone, and polyvinyl alcohol.

37. (Currently Amended) A composition for forming a corrosion preventive protective coating according to Claim 35, ~~comprising~~ wherein the at least one inorganic thickener ~~selected from the group consisting of finely powdered silica, bentonite, kaolin, and~~ is synthetic hectorite.

38. (Previously Presented) A composition for forming a corrosion preventive protective coating according to Claim 35, additionally comprising at least one substance selected from the group consisting of solid lubricants and extreme-pressure additives.

39. (Previously Presented) A composition for forming a corrosion preventive protective coating according to Claim 35, wherein the alkali silicate is at least one selected from the group consisting of sodium silicates and potassium silicates with SiO_2/M_2O molar ratios of 2 to 4.

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40. (Previously Presented) A composition for forming a corrosion preventive protective coating according to Claim 39, wherein the at least one lubricating component is selected from among oils, soaps, metallic soaps, and waxes.

41. (Previously Presented) A composition for forming a corrosion preventive protective coating according to Claim 40, wherein the at least one lubricating component is selected from among soaps, metallic soaps, and waxes.